

Serial No. 09/917,782

Docket No. 1509-203

Page 2

IN THE CLAIMS:

Please cancel claims 21-44 without prejudice or disclaimer, and amend claims 1, 3, 5, 6, 9-11, and 16-20 as follows:

1. (Currently amended) A method of centralized data position information storage and utilization comprising the steps of:

arranging a byte stream of data into partitioned logical data;

storing data position information relating to said logical data in a reserve storage area;

transferring all said information from said reserve storage area only to a centralized storage area, wherein said centralized storage area is configured to store said information relating to substantially all said partitioned logical data; and

locating target data that is part of said logical data by applying a search algorithm to said data position information stored in said centralized storage area,

said search algorithm being configured to locate said target data.

2. (Cancelled)

3. (Currently amended) The method as claimed in claim 1, wherein said logical data comprises:

Serial No. 09/917,782

Docket No. 1509-203

Page 3

records and filemarks[[]], wherein said centralized storage area stores data position information relating to said records and said filemarks in a data table, the locating step including reading from the data table the stored position information relating to said records and said filemarks.

4. (Previously presented) The method as claimed in claim 1, wherein said centralized storage area stores logical data position information relating to a plurality of selected logical data groups, the locating step including reading the stored logical data position information relating to the plurality of selected logical data groups.

5. (Currently amended) A method of storing and utilizing data position information on a tape data storage device, said method comprising the steps of:

arranging a byte stream of data into partitioned logical data;

recording said logical data onto a length of tape;

storing data position information relating to said logical data in a reserve storage area;

transferring all said information from said reserve storage area only to a centralized storage area located within said tape device, wherein said centralized storage area stores said information relating to substantially all said partitioned logical data; and

Serial No. 09/917,782

Docket No. 1509-203

Page 4

locating target data on said tape by applying a search algorithm to said data position information stored in the centralized storage area, said search algorithm being configured to locate said target data;

determining the required transporting of said logical data relative to a read head to enable said target data to be read[[]], said target data being part of said logical data; and

reading said target data by using the read head when the logical data is at the read head.

6. (Currently amended) The method as claimed in claim 5, wherein the step of transferring said data position information comprises:

transferring said information to a data table within said centralized storage area;

arranging said information within said data table so as to minimize the time period taken to locate said target data on said tape when utilizing said information.

7. (Cancelled)

8. (Previously presented) The method as claimed in claim 5, wherein said data position information in said centralized storage area relates to a plurality of selected data groups, said data groups being distributed along the length of the tape.

Serial No. 09/917,782

Docket No. 1509-203

Page 5

9. (Currently amended) The method as claimed in claim 5, further comprising the step of:

transferring said data position information in said centralized storage area to a reserve storage area.

10. (Currently amended) A data position information storage and utilization device comprising:

partitioned logical data distributed across a length of tape;

a reserve storage area storing data position information relating to said logical data;

a centralized storage area configured to store said information received from said reserve storage area, said centralized storage area being configured to store information relating to substantially all said partitioned logical data;

a processing arrangement for transferring all said information from said reserve storage area only to a centralized storage area;

a search algorithm for determining the location of target data on said tape; and

a read head configured to read said logical data on said tape;

said device being operable, in response to a request for said target data, to locate said target data on said tape in response to (a) information in said centralized storage

Serial No. 09/917,782

Docket No. 1509-203

Page 6

area and (b) the target data location determined by the search algorithm, and to read said target data by using said read head.

11. (Currently amended) A device as claimed in claim 10, wherein said reserve storage area is located on at least one portion of said tape.

12. (Previously presented) A device as claimed in claim 10, wherein said reserve storage area is in a cartridge memory.

13. (Previously presented) A device as claimed in claim 10, wherein said centralized storage area is located substantially within a tape drive including said read head.

14. (Cancelled)

15. (Cancelled)

16. (Currently amended) The method of claim 1, wherein the reserve storage area is volatile memory external to the tape, and erasing the volatile memory in response to the tape being removed from a device for reading the tape.

17. (Currently amended) The device of claim 10, wherein the reserve storage area is volatile memory external to the tape.

Serial No. 09/917,782

Docket No. 1509-203

Page 7

18. (Currently amended) The method of claim 5, wherein the tape includes plural parallel tracks and the algorithm derives a physical target position for a track different from the track where the head is positioned in response to indications of logical current and logical target positions and causes the head to move the physical target position without going to a beginning of wrap or an end of wrap.

19. (Currently amended) The device of claim 10, wherein the tape includes plural parallel tracks and the algorithm is arranged to derive a physical target position for a track different from the track where the head is positioned in response to indications of logical current and logical target positions to cause the head to move the physical target position without going to a beginning of wrap or an end of wrap.

20. (Currently amended) The device of claim 19, wherein the reserve storage area is volatile memory external to the tape.

21-44. (Cancelled)